

REMARKS

Claims 1-5 and 7-23 are pending. New claims 21-23 have been added to recite additional features of Applicant's invention. Reconsideration of the application is respectfully requested for the following reasons.

On April 14, 2004, the Examiner graciously extended Applicant's representative an interview to discuss the rejections in the Office Action. During the interview, it was emphasized that (1) no teaching or suggestion was in existence at the time the claimed invention was made to combine the Ma, Liddy, and Herz references in the manner suggested by the Examiner, nor would one of ordinary skill in the art be motivated to do so because such a combination would render an inoperable result, and (2) even if the references were combined the resulting combination would not include the "whole feedback information" recited in the claims.

At the conclusion of the interview, the Examiner agreed to postpone his decision concerning the patentability of the claims upon receiving this paper, which sets forth the reasons for traversal of the outstanding rejections. New claims 21-23 have been added to provide a more specific description of how the feedback information of the claimed invention relates to the image information in the data structure. As discussed during the interview, the cited combination of references do not teach or suggest these features.

In the Office Action, claims 1-3 were rejected under 35 U.S.C. § 103(a) for being obvious over a Ma-Liddy-Herz combination. Applicant respectfully submits that this rejection is in error for the following reasons.

Claim 1 broadly recites the embodiments of the invention disclosed in the specification. As acknowledged in the Office Action, Ma does not teach or suggest “whole feedback information based on the user relevance feedback obtained since formation of the data structure” as recited in claim 1. To make up for this deficiency, the Liddy patent was cited.

The Office Action states that “whole feedback” reads on “relevance feedback” on a “periodic time interval on page 3.” Moreover, the Office Action acknowledges that Liddy does not teach or suggest a multimedia data structure which stores user relevance feedback information since the time the data structure was formed as recited in claim 1. Furthermore, the Office Action states that Ma and Liddy combined still do not teach feedback obtained since formation of the data structure on page 4. Thus, it is submitted that Liddy adds very little if anything in terms of teaching or suggesting the features of claim 1 missing from Ma.

To make up for these deficiencies, the Herz patent was cited. Herz discloses a system which allows users to access newspapers, advertisements, and investment-related information in electronic form. In rejecting claim 1, the Examiner relied on two portions of the Herz patent to provide the whole feedback information of the invention.

The first portion (column 17, lines 30-40) discloses a filtering system which searches through target objects in a database and then estimates a user's interest level in each object found. The interest level is estimated from relevance feedback entered by a user. This feedback is stored on a long-term basis in association with each object. No specific indication is given, however, as to what "long-term" means, e.g., long-term in the context of the Herz system may be just a couple of days or months. What is clear is that this portion of the Herz patent does not teach or suggest "whole feedback information based on user relevance feedback obtained since formation of the data structure" as recited in claim 1.

The second portion (column 19, line 45 – column 20, line 10) is even less relevant. This portion discloses a specific application of the filtering system applied to tracking the performance of an investment. In the Office Action, the Examiner indicated that the phrase "since formation of the data structure" was interpreted as corresponding to user feedback provided for invention since it was owned from the year 1990. This feedback information relates to performance of an investment taken over a period of years 1990, 1991, 1992, 1993, 1994, and 1995, and thus does not in any way relate to a feature of an image as recited in claim 1.

Moreover, the feedback information obtained in both portions of Herz is not included in a data structure as recited in claim 1. Rather, the feedback information of Herz is merely stored in association with the target object (e.g., image) itself found during a search, which does not constitute a data structure.

Because the Herz patent does not teach or suggest “whole feedback information” relating to a data structure for an image, it is respectfully submitted the Herz patent cannot make up for the deficiencies of Ma and Liddy.

For at least these reasons, Applicant respectfully submits that a combination of Ma, Liddy, and Herz cannot render claim 1 or any of its dependent claims obvious.

Also, Applicant brings to the Examiner’s attention that under MPEP § 2143.03, if modifying a primary reference to include features of a secondary reference would render the primary reference inoperable, the combination is improper for purposes of rejecting a claim under 35 U.S.C. § 103(a). This situation exists here. The Ma patent discloses a method for retrieving images from an image database. This system uses a correlation matrix which organizes data in a cluster configuration. Feedback information is used to arrange this data in appropriate clusters.

The Liddy patent discloses a neural network which performs internet searches. This neural network is trained with a set of training documents. When relevance feedback is received, the set of training documents is modified and the weights of the neural network are updated.

Modifying Ma to include the neural network of Liddy would render the resulting system completely inoperative. The correlation matrix is the processing entity in Ma that performs searches. These searches are performed using a cluster configuration of data. Making the modification proposed by the Examiner would require replacing the correlation matrix of Ma with the neural network of Liddy. The

Liddy patent does not teach or suggest that its neural network reconfigures or otherwise operates using a cluster configuration for purposes of performing searches based on feedback information.

Adding Herz only makes this inoperability more apparent. The Herz system uses a filtering system which performs searches and stores feedback information with investment and other information in a database. Adding Herz would require modifying the neural network of Liddy to operate with the Herz filtering system. Neither Herz, nor Ma, nor Liddy teach or suggest how such a combination can be formed and at the same time produce an operable result. Such an operable result is not possible because these elements are not designed to operate with one another.

Because no teaching or suggestion exists to combine Ma, Liddy, and Herz and because a combination of these patents would produce an inoperable system, it is respectfully submitted that the cited combination was formed as a result of hindsight, formed as a result of the Examiner picking and choosing features from different references and then combining them without any legitimate basis for doing so. The Federal Circuit and Board of Patent Appeals both agree that such a combination is improper for underlying an obviousness-type rejection.

Claim 3 further recites that the whole feedback information is “represented by a weight value learned by the user relevance feedback given since formation of the data structure.” The Ma, Liddy, and Herz patents do not teach or suggest whole feedback information of any kind, let alone one which is represented by the type of

weight value recited in claim 3. Applicant therefore submits that claim 3 is also allowable based on the features separately recited therein.

The Examiner rejected claims 4 and 14-20 under 35 U.S.C. § 103(a) as being unpatentable over Ma in view of Liddy and further in view of Herz as applied to claims 1-3 above and still further in view of Cohen, U.S. Patent No. 6,067,539. The rejection is respectfully traversed for the following reasons.

Claim 4 depends from claim 1. In order to render claim 4 obvious, the Cohen patent must teach or suggest the type of whole feedback information recited in claim 1 which is missing from Ma, Liddy, and Herz.

Cohen discloses a browser for performing a key word search on internet web sites. During this search, Cohen matches a score for a retrieved message which reflects the relevancy and the reliability of the message. Cohen, however, does not teach or suggest a data structure including whole feedback information obtained since formation of the data structure. Absent a teaching or suggestion of these features, it is respectfully submitted that a Ma-Liddy-Herz-Cohen combination cannot render claim 1 and thus claim 4 obvious. Application further submits that no teaching or suggestion exists for modifying a Ma-Liddy-Herz combination to include Cohen, as such a modification would be inoperable.

New claims 21-23 have been added to the application.

Claim 21 recites, in part, that the whole feedback information provides “an indication of relevance of said information describing the at least one feature of the certain image.” None of the cited references teach or suggest or suggests whole feedback information of this type, e.g., the feedback information in Herz relates to performance of an investment over a period of years and not to any feature associated with an image.

Claim 22 recites that “at least one feature includes at least one of a color histogram, a texture histogram, and a dominant color of the image.” See page 2 of the specification where these features are listed. None of the cited references teach or suggest or suggests whole feedback information of this type

Claim 23 recites that “said information provides a statistical description of the image.” This statistical description may be in the form of a color histogram or some other form. None of the cited references teach or suggest or suggests whole feedback information of this type.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, Samuel W. Ntiros, at the

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telephone number listed below. Favorable consideration and prompt allowance are earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP



Carl R. Wesolowski
Registration No. 40,372

Samuel W. Ntiros
Registration No. 39,318

P.O. Box 221200
Chantilly, Virginia 20153-1200
703 766-3701 DYK:CRW:SWN:JHB/par
Date: April 29, 2004

Please direct all correspondence to Customer Number 34610